

+STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Village of Tilton, Vermilion County, Illinois  
Petitioner

vs.

Norfolk and Southern Railroad and State of Illinois, Department of  
Transportation,  
Respondents

T00-0103

Petition for an Order regarding a separation of grades and  
construction of a bridge carrying 14<sup>th</sup> Street (FAU 7010), Village  
of Tilton, Vermilion County, Illinois, over the tracks of said  
Railway Company, apportioning cost thereof and directing an  
appropriate portion thereof to be borne by the Grade Crossing  
Protection Fund.

SECOND SUPPLEMENTAL INTERIM ORDER

On January 4, 2001, the Illinois Commerce Commission ("Commission") held the first hearing in this matter before a duly authorized Administrative Law Judge at the Commission's Springfield office. Present at the hearing was counsel for the Norfolk Southern Railway Company ("NS"). Representatives of the Village of Tilton ("Village"), the Illinois Department of Transportation ("IDOT"), and staff of the Commission's Rail Safety Section were present and participated in the hearing. Pursuant to a pre-hearing conference, it was discovered that CSX Transportation, Inc ("CSX") will be a necessary party to this Docket and the matter was continued in order for the Village to file an Amended Petition naming therein CSX Transportation, Inc as a Respondent.

On May 1, 2001, an additional hearing was held at the Commission's Springfield office. Present at the hearing was counsel for the Village and the NS. A representative of IDOT and the staff of the Commission Rail Safety Section were present and participated in the hearing. The Village Consulting Engineer provided information concerning certain aspects of the existing and proposed improvements. Plans were presented and the phases of the projects were reviewed, along with preliminary costs for the aforementioned improvements.

On December 5, 2001, the Commission entered its Interim Order that approved the 14<sup>th</sup> Street project in the Village, involving the reconstruction/realignment of 14<sup>th</sup> Street and the construction/reconstruction of highway overpass structures carrying 14<sup>th</sup> Street over the tracks of the NS and CSX as a safety improvement project and granted permission to the parties to

proceed with the project under certain conditions. The Commission granted permission to the Village to proceed with the preliminary engineering, phase 1 and 2, pertaining to the 14<sup>th</sup> Street project. The Village was required to submit the phase 1 plans and cost estimate separated into (1) the cost for the NS highway overpass structure; (2) the cost for the CSX highway overpass structure, and (3) the cost for the immediate highway approaches to the highway overpass structures. The initial costs toward the preliminary engineering for the project was allocated to the Grade Crossing Protection Fund ("Fund") in the amount of \$618,500 as contained in Finding (4) of the Interim Order. It was the intent of the Commission to issue further Order(s) in this matter increasing the Fund participation to the maximum amount as set forth in Finding (4) of the Interim Order only after a written request from the Village was received by the Director of Processing and Information, Transportation Division of the Commission, stating the need for additional payments from the Grade Crossing Protection Fund.

The Commission received the required notification and a hearing on the construction phase of the project was scheduled at the Commission's Springfield office on February 21, 2002. Instead of taking testimony on the construction phases of the project, a new matter pertaining to mine subsidence in the area of the project was discussed. Testimony on the construction phases of the project was not presented at this hearing. From testimony provided by a mine subsidence expert, Dr. Marino, a potentially costly and/or unsound situation from mine subsidence could possibly occur over and near the mined out areas under the project, which are primarily east of and to a small extent somewhat west of the proposed NS structure. On May 8, 2002, the commission entered its Supplemental Interim Order that granted permission for a study of the mine subsidence in the area of the proposed construction. The cost for this study was estimated to be \$283,400. At a hearing on November 20, 2002, the Mine Subsidence Study was presented to the parties for their review, which confirmed the potential for subsidence and estimated the costs of mine grouting remediation alternatives. The matter was continued until January 22, 2003, to give the parties time to review the subsidence study and recommendations.

Discussions between IDOT, Village and staff ensued regarding various options for dealing with future mine subsidence on the project. Dr. Marino indicated grouting the mined out area under the project is the most reliable method of preventing future subsidence, and estimated the additional cost to grout the mined out areas under the project to be approximately \$1,000,000. The Village is particularly concerned about any future maintenance costs or liabilities resulting from subsidence because of their relatively low revenue generating capabilities. IDOT is opposed to grouting under the project because of the added expense, the potential for higher than anticipated grouting costs, their relatively successful record to date of building structures over mined out areas, and their desire not to set a precedent for grouting mined out areas under structures. The use of light-weight cellular concrete fill versus normal earthen embankment materials in order to minimize the weight of the embankment was

investigated somewhat. This would reduce the probability of future subsidence but would likely add approximately \$500,000 to the project cost if used. IDOT directed that in exchange for their participation in future maintenance costs due to mine subsidence, that light-weight cellular concrete fill not be used, and that the structure should be constructed to accommodate future subsidence movements as much as possible with a minimum of damage, and that the damage resulting should be repairable to the maximum extent possible. IDOT further directed the use of extensible geotextile (non-metallic) soil reinforcement whenever possible over the mined out areas coupled with some form of two-stage Mechanically Stabilized Earth (MSE) wall which involves an inner geotextile and/or wire wall which will move with subsidence, yet still contain the embankment fill, should the outer concrete panel wall need to be removed for repairs. The MSE wall to be constructed involves the above referenced concept west of the NS structure, where it can be reasonably executed, coupled with the use of limited size rectangular panels throughout to permit the most movement without damage, and with future adjustability to be built in to the two-stage walls to maximize re-use of face panels should they require future adjustments. Further, the top layer of the embankment under the pavement is composed of an open graded material which can be pumped with grout using slab jacking techniques in the future to help straighten out subsidence areas somewhat under the pavement should they develop. The additional cost for the two-stage MSE wall construction, where used, is estimated to be on the order of \$250,000.

On October 8, 2003 and October 29, 2003, hearings were again held at the Commission's Springfield office. At the October 8, 2003, hearing counsels for the NS, CSX, and Village entered appearances for their clients. Representatives of IDOT and staff of the Commission's Rail Safety Section were present and participated in the hearing. At the October 29, 2003, hearing, the same parties were present except counsel now represented IDOT. At the October 29, 2003, hearing, the parties stated that a cost division had been agreed to but through a pre-hearing conference, it was learned that the cost division has approximately \$150,000 unfunded. The parties asked for a continuance to continue discussions on the cost division and the matter was set for December 10, 2003.

As shown on the most recent plans presented by the City, the proposed 14<sup>th</sup> Street improvements generally follow the existing roadway alignment. The project shall be constructed on the existing alignment or a new alignment as agreed on by each Agency. The 14<sup>th</sup> Street Improvements Project begins at Sta. 265+00 and ends at Sta. 301+00. The ICC eligible portion of the project consists of the improvements along 14<sup>th</sup> Street from Sta. 265+00 to Sta. 285+00 including all side road connections and appurtenances and is generally described as follows. The typical pavement section over the CSX RR consists of a 3-lane (13'-12'-13') concrete pavement with a concrete sidewalk (10') along one side of the roadway. The span of the 3-sided pre-cast concrete bridge over the CSX RR is 42'-0". The typical pavement section over the NS RR varies from a 3-lane (13'-

12'-13') to a 2-lane (13'-13') concrete pavement with a concrete sidewalk (10') along one side of the roadway. The span of the reinforced concrete deck bridge constructed over the NS RR is 97'-4 7/8". In general, the typical pavement section from Sta. 285+00 to 301+00 is a 3-lane (11'-12'-11') concrete pavement with a concrete sidewalk (5') on both sides of the roadway. In order to undertake and complete the proposed construction, easements must be obtained from CSX and NS.

On May 3, 2004, the NS sent correspondence to Mr. Schuering, counsel for the Village, outlining NS's understanding of its cost for the project. NS stated that the total cash contribution from the NS toward the project pertaining to its railroad shall not exceed \$380,000, which will be paid in a lump sum upon completion and final acceptance of the project. Secondly, NS force account work, estimated to be \$144,250, to accommodate the construction of the proposed bridge and roadway work is 100% reimbursable at project expense and is separate and distinct from NS's lump sum contribution. Railroad flagging costs are already included in the calculation of the construction cost for this project, and will also be 100% reimbursable at project expense.

On May 14, 2004, staff forwarded a proposed cost division to all the parties for the project for their review and response. On May 27, 2004, May 28, 2004, and June 3, 2004, responses were received from the CSX and IDOT, respectively. Mr. Cook, counsel for CSX, states in his Response to staff's proposed cost division that the correct CSX force account amount is \$75,427. The proposed cost division has the amount as \$35,750. A revised estimate is attached to the Response.

In a letter dated May 20, 2004, Mr. Dan Schuering, counsel for the Village, advised that costs for railroad flagging will be borne by the bidding contractor in an effort by the Village to control the contractor's costs, to wit: "the contractual specifications and project documents clearly provide that this cost is a responsibility of the contractor for which the project will not provide, to the contractor, additional compensation in the event additional days of railroad flaggers are necessary. Railroad flagging costs have been otherwise included as a cost to be paid by the bidding contractor and have been included as a construction cost line item." The Village continues: "In the event additional days of flagging are necessary, or in the event that flagging costs are incurred in excess of those identified in the force account estimate of CSX, the Village of Tilton has assured CSX that the bidding contractor will reimburse CSX those additional cost as billed by CSX. The Village has represented that by inclusion of flagging cost as a construction cost line item, it has not intended to eliminate any necessary railroad flagging operations or to reduce CSX's reimbursement for those flagging costs". The Village further recommended that any Commission Order in this matter include a clarification that CSX will be reimbursed by the bidding contractor for its flagging cost as billed, even if in excess of the construction cost line item. The same provisions apply to the NS.

IDOT'S Response to the proposed cost division filed by Stacey Hollo, counsel for IDOT, stated that IDOT has no objection to the proposed cost division provided that the Commission and the Railroad amounts are regarded as lump sum amounts to be paid regardless of the actual project costs. In support of its position, IDOT noted that the Commission and Railroad's figures are below the customary percentages expected in this type of project and IDOT has been assessed a majority of the project costs. Accordingly, IDOT submitted that if the project comes in under the estimated cost any savings should be applied to IDOT'S portion and not to the Commission or Railroad costs until a 60% and 5%, respectively, allocation of costs is met. Staff disagrees. This project was necessitated by IDOT'S project on Ill. Rte 1 and staff advocates that if the cost of the project is less than the estimated cost, all the parties should share in the savings per the percentages as listed in Appendix A, attached hereto.

On June 3, 2004, CSX filed a response to IDOT'S response to Staff's Proposed Cost Division reiterating it's previous position and requests.

Staff has reviewed these comments and has no objection to incorporating them into the Second Supplemental Interim Order.

The Commission, having due consideration to the entire record herein, finds that:

- 1) The Commission has jurisdiction of the parties hereto and the subject matter hereof;
- 2) The recitals of fact as set forth in the interim portion of this Second Supplemental Interim Order are true and correct and are hereby adopted as findings of fact;
- 3) The City of Tilton should be required to proceed with the construction of the 14<sup>th</sup> Street highway overpass structure over the track of the NS and the reconstruction of the existing highway overpass structure carrying 14<sup>th</sup> Street over the track of CSX;
- 4) The cost for the proposed improvements should be divided among the parties and the Grade Crossing Protection Fund of the Motor Fuel Tax Law, in accordance with the Law;
- 5) It is fair and reasonable that the Secretary of the Illinois Department of Transportation through the Grade Crossing Protection Fund of the Motor Fuel Tax Law and its own funds, the City of Tilton, and the Norfolk Southern Railway Company, and CSX Transportation, Inc, be directed to bear their respective portions of the actual cost of the proposed improvements as set forth in the table attached as Appendix A at the end of this Order; the

amount to be obligated from the Fund shall not exceed \$4,016,600 (Fund monies have already been obligated for preliminary engineering and the subsidence study); the amount to be paid by the NS and CSX shall not exceed \$380,000 and \$85,000, respectively; all cost of future maintenance of the highway overpass structures and highway approaches thereto, shall be borne by the Village;

- 6) 625 ILCS 5/18c-1701 and 1704 require each "person", as defined by Section 18c-1104, to comply with every regulation or order of the Commission. These sections further provide that any person who fails to comply with a Commission regulation or Order shall forfeit to the state not more than \$1,000 for each such failure, with each day's continuance of the violation being considered a separate offense. While the Commission expects all parties to comply with this Order in all matters addressed herein and in a timely manner, the Commission advises that any failure to comply may result in the assessment of such sanctions.

IT IS THEREFORE ORDERED by the Illinois Commerce Commission that permission be, and it is hereby granted to the Village of Tilton to proceed with the construction phase of the construction of the highway overpass structure carrying 14<sup>th</sup> Street over the track of the Norfolk Southern Railway Company and the reconstruction of the existing highway overpass structure carrying 14<sup>th</sup> Street over the track of CSX Transportation, Inc. substantially in the manner and location as set forth in the preliminary portion of this Second Supplemental Interim Order and by pages 1-17 of the plans attached to this Order, and marked Exhibit 1.

IT IS FURTHER ORDERED that the Village of Tilton be, and it is hereby, required and directed to proceed immediately in performing its work substantially as described in the prefatory portion of this Order and to the plans attached to this Order and shall complete its work within thirty-six (36) months from the date of this Order.

IT IS FURTHER ORDERED that within thirty (30) days of the date of this Second Supplemental Interim Order, Petitioner shall submit all of the final construction plans and all appropriate easement documents and agreements to all Respondents. Thereafter, a hearing in this docket will be scheduled in order to review and consider the final construction plans, mine subsidence report and easement documents; and to address any other outstanding matters and issues in relation to this docket.

IT IS FURTHER ORDERED that the cost of making the improvements herein required shall be divided among the parties and the Grade Crossing Protection Fund of the Motor Fuel Tax Law, as set forth in Finding (5) herein and

Appendix A, attached hereto. The bidding contractor will reimburse CSX and NS for its flagging costs as billed, even if in excess of the estimated cost.

IT IS FURTHER ORDERED that since federal funding may be utilized for the grade separation and roadway improvements at the subject crossings, all such work shall be covered by appropriate provisions of Title 23, Chapter I, Subchapter G, Part 646 of the Federal-Aid Policy Guide adopted Dec. 9, 1991.

IT IS FURTHER ORDERED that all bills for expenditures authorized to be reimbursed from the Grade Crossing Protection Fund shall be submitted to the Fiscal Control Unit of the Illinois Department of Transportation's District 5 Bureau of Local Roads and Streets, 13473 IL Hwy. 133, P.O. Box 610, Paris, Illinois, 61944. The Department shall submit a copy of all bills to the Director of Processing and Information, Transportation Bureau of the Commission. The final bill for expenditures from the City of Tilton and/or the Railroads shall be clearly marked "Final Bill". In addition, authorization for reimbursement from the Grade Crossing Protection Fund for this project shall expire, and the Department shall de-obligate all remaining Grade Crossing Protection Fund dollars, twelve (12) months after the completion date specified in this or any Supplemental Order for this project issued by the Commission.

IT IS FURTHER ORDERED that the City of Tilton shall within one hundred twenty (120) days from the date of this Order furnish to the Illinois Department of Transportation for its approval two (2) copies of the construction plans applying to the construction and reconstruction of the aforementioned grade separation structures.

IT IS FURTHER ORDERED that City of Tilton shall file a written report with the Director of Processing and Information, of the Commission's Transportation Bureau, within fifteen (15) days of the conclusion of each calendar quarter, stating the status of the billing for Grade Crossing Protection Fund reimbursement for their portion of the project and the percentage of completion of their portion of the project; if any portion of the project is behind schedule, the report must include a brief explanation of the reason(s) for the delay.

IT IS FURTHER ORDERED that any person making a Request For Extension Of Time up to 30 days to complete a project ordered by the Commission must file a request with the Director of Processing no later than 14 days in advance of the scheduled deadline. An Administrative Law Judge will consider and decide the request.

IT IS FURTHER ORDERED that any person requesting a extension of time that exceeds 30 days must file a Petition For Supplemental Order with the Director of Processing no later than 21 days in advance of the scheduled deadline. The Commission will decide Petitions For Supplemental Orders.

IT IS FURTHER ORDERED that requests For Extension Of Time and Petitions For Supplemental Orders must include the reason(s) the additional time is needed to complete the work and the time within which the project will be completed. Prior to submitting a Request For Extension Of Time or a Petition For Supplemental Order, the person must notify the Commission's Rail Safety Program Administrator that it is unable to complete the project within the ordered timeframe.


IT IS FURTHER ORDERED that the Commission or its Administrative Law Judge reserves the right to deny Petitions For Supplemental Orders and Requests For Extension Of Time, if the reason(s) supporting the request is insufficient or where it appears the person has not made a good faith effort to complete the project within the allotted time. Failure of the Commission or Administrative Law Judge to act on a pleading prior to the deadline means the originally ordered completion date remains in effect.

IT IS FURTHER ORDERED that Norfolk Southern Railway Company shall within five (5) days of the completion of the highway overpass structure over its track, submit to the Director of Processing and Information a United States Department of Transportation Inventory Form (#6180.71) as notice of the change in the 14<sup>th</sup> Street crossing status.

IT IS FURTHER ORDERED that the City of Tilton shall submit to the director of Processing and Information within five (5) days of the completion of the work herein required of it, a written notice of said completion.

IT IS FURTHER ORDERED that subject to Sections 18c-2201 and 18c-2206 of the Law, this is a final decision of the Commission subject to Administrative Review Law.

By Order of the Commission this 29<sup>th</sup> day of June, 2004.

A handwritten signature in black ink, reading "Edward C. Husley" with a stylized flourish at the end.

Chairman



**PRELIMINARY ONLY**  
**SUGGESTED DIVISION OF COST**  
**14th STREET IMPROVEMENTS (MFT Section 00-00026-00-BR)**  
**TILTON, IL**

ITEM	SUGGESTED DIVISION OF COST										COST SUMMARY			
	RAILROAD FUNDS			LOCAL/STATE FUNDS				TOTAL COST	ICC ELIGIBLE COST STA 265+00 TO STA 285+00	NON ICC ELIGIBLE COST STA 285+00 TO STA 301+00	TOTAL COST			
	ICC GCPF FUNDS	CSX	NS	TILTON MFT FUNDS	IDOT TARP FUNDS	IDOT CONSTRUCTION FUNDS (RAMP Credit)	IDOT CONSTRUCTION FUNDS							
CONSTRUCTION	3,279,480	49,250	235,750	58,000	114,600	676,000	3,827,540	8,240,620	7,174,060	1,066,560	8,240,620			
PRELIMINARY ENGINEERING (PH I)	754,200	-	-	-	-	-	83,100	837,300	754,200	83,100	837,300			
PRELIMINARY ENGINEERING (PH II)	346,800	-	-	-	-	-	336,100	682,900	578,000	104,900	682,900			
CONSTRUCTION ENGINEERING (PH III)	538,020	-	-	-	-	-	515,980	1,054,000	887,500	166,500	1,054,000			
ROW & LAND ACQUISITION	-	-	-	31,020	-	-	500,980	532,000	532,000	-	532,000			
RAILROAD FORCE ACCOUNT	-	35,750	144,250	-	-	-	-	180,000	180,000	-	180,000			
EST. TOTAL PROJECT COST	4,918,500	85,000	380,000	89,020	114,600	676,000	5,263,700	11,526,820	10,105,760	1,421,060	11,526,820			
% PARTICIPATION ICC ELIGIBLE COST	48.67%	0.84%	3.76%											
% PARTICIPATION TOTAL PROJECT COST	42.67%	0.74%	3.30%	0.77%	0.99%	5.86%	45.66%	100.00%						

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
LOCAL AGENCY PROJECT  
VILLAGE OF TILTON**

**PROPOSED  
14th STREET IMPROVEMENT**

**FAU ROUTE 7010 (14th STREET)  
SECTION 00-00026-00-BR  
PROJECT C-95-020-94  
VERMILION COUNTY**

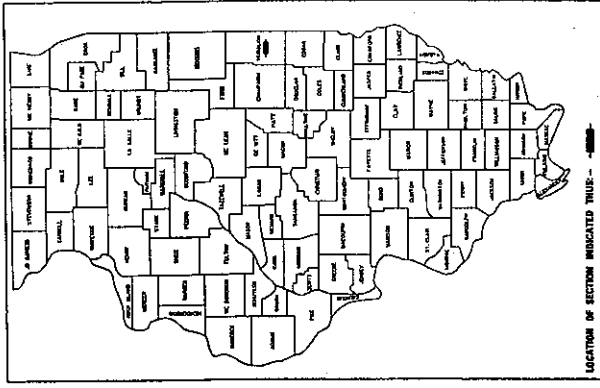
## 14th STREET IMPROVEMENTS

**FAU ROUTE 7010 (14th STREET)**

**SECTION 00-00026-00-BR**

**PROJECT C-95-020-94**

VERMILION COUNTY

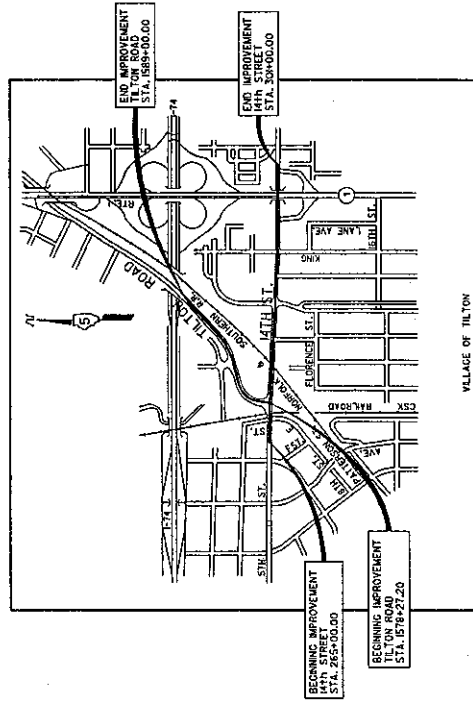


LOCATION OF SECTION INDICATED THIS - [REDACTED]

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PASSED: DISTRICT ENGINEER OF LOCAL ROADS & STREETS	DATE
APPROVED: DISTRICT ENGINEER	DATE
PLANS APPROVED BY:	
MAYOR VILLAGE OF TILGHAM	DATE

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OF THE STATE OF ILLINOIS**



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12

LOCATION MAILING ADDRESS

**TOTAL LENGTH OF IMPROVEMENT = 7202.51 FEET = 1.364 MILES**  
**NET LENGTH OF IMPROVEMENT = 7202.51 FEET = 1.364 MILES**

**DESIGN DESIGNATION - CLASS II ROADWAY, 13.125 ADT (14th STREET)**

**FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR (14th STREET)**

FUNCTIONAL COURSEWORK - MAJOR COLLECTIONS  
LIBRUS (401) MAIN ST - CEDARS NURSERY

DESIGN DESIGNATION - CLASS II ROADWAY, 2.50 ADT (TILTON ROAD)

DESIGN INFORMATION - CLASS A ROADWAY, 2,250 ADT (MILTON ROAD)  
FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR (MILTON ROAD)

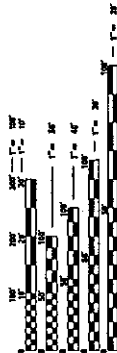
CLASSIFICATION - MAJOR COLLECTION (T)  
DESIGN SPEED - 35 MPH (TILTON ROAD)

### VILLAGE OFFICIALS

**MAYOR**  
**CLERK**  
**TREASURER**  
**TRUSTEE**

## INDEX OF SHEETS

**(SEE SHEET 2)**



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

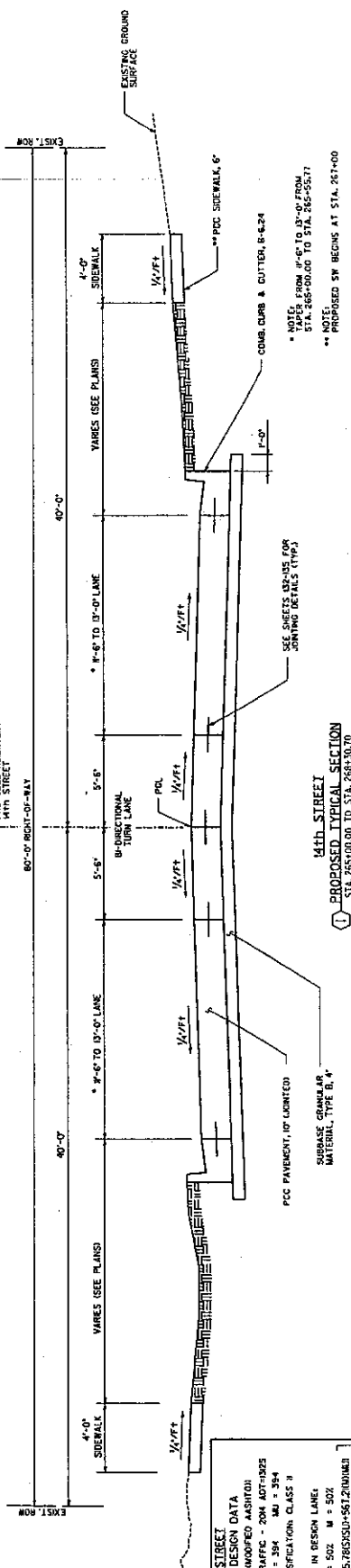
**JULIE.**  
**JOINT UTILITY LOCATION - INFORMATION FOR EXCAVATION**  
**1-800-492-0123**

THOMAS L. OVERMYER  
REGISTERED PROFESSIONAL ENGINEER  
ILLINOIS NO. 49198 EXPIRES NOVEMBER 30, 2005

**WOODROW C. CHENAULT JR.,  
REGISTERED STRUCTURAL ENGINEER  
ILLINOIS NO. 3567 EXPIRES NOVEMBER 30, 2004**

**SCOTT B. MCGARRISON**  
REGISTERED STRUCTURAL ENGINEER  
ILLINOIS NO. 5104 EXPIRES NOVEMBER 30, 2004

- \* NOTE:  
TAPER FROM 5'-6" TO 0'-0" FROM  
STA. 271+55.52 TO STA. 273+75.52
- \* NOTE:  
CONSTRUCT CONCRETE MEDIAN, TYPE  
SB-606, FROM STA. 268+81.00 TO  
STA. 270+47.62
- \* NOTE:  
CONSTRUCT SUBGRADE DRAINAGE  
MATERIAL, TYPE C, 8" FROM  
STA. 276+00.24 TO STA. 281+68.70



PAYMENT THICKNESS (FIG. 54-AK)  
3/4" P.C.C. PAVEMENT

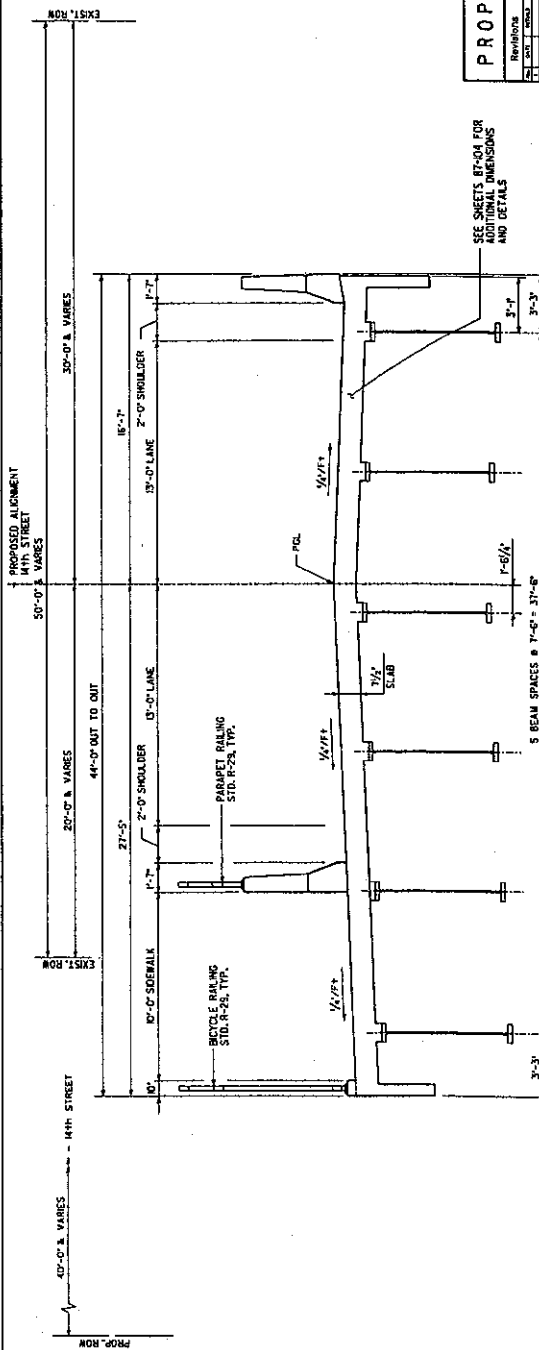
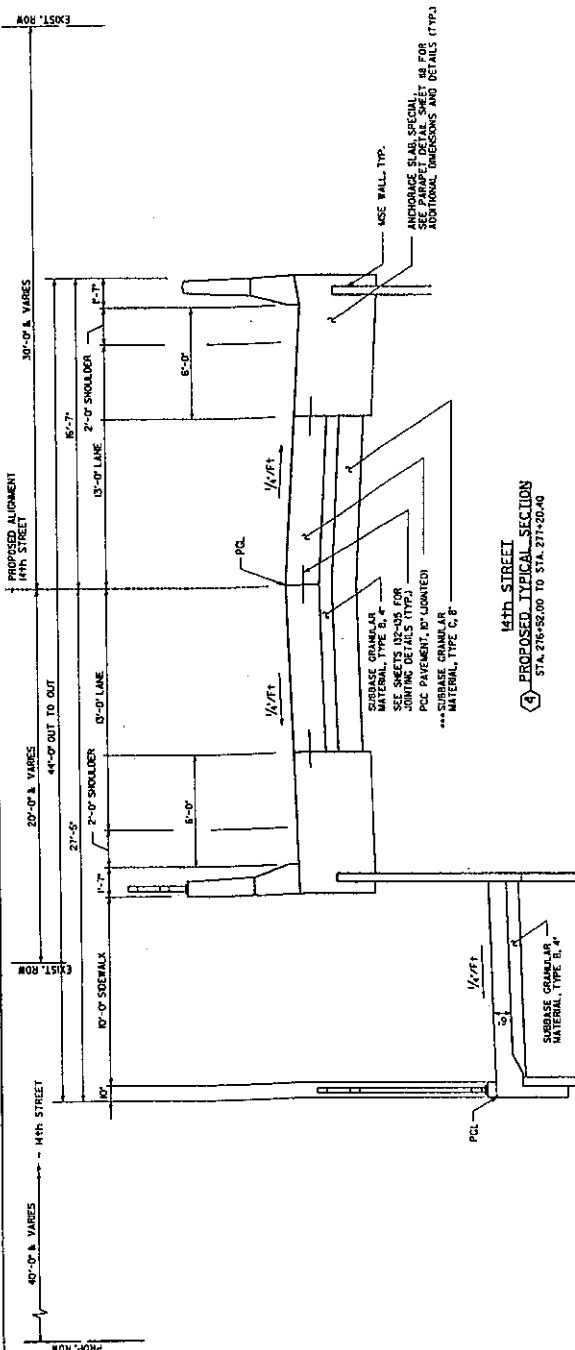
PAYMENT THICKNESS PROVIDED  
10" P.C.C. PAVEMENT (JOINTED)  
4" SUBBASE GRANULAR MATERIAL, TYPE B

SUBBASE SUPPORT RATING  
SSR = POOR

<p><b>PROPOSED TYPICAL SECTIONS</b></p> <p>FAU ROUTE 700 (44TH STREET) TILTON, LINDS</p>	<p>Reviewed by SEA 1004</p> <p>Supervising EAC</p> <p>Designed JAC</p> <p>Drawn JAC</p> <p>Checked T.B</p> <p>Approved T.B</p> <p>Date 5-5-04</p> <p>Job No. 110045</p>	<p><b>DA</b></p> <p>Derry &amp; Associates, Engineers, Inc. Charlotte, North Carolina Lynchburg, Kentucky</p>
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DATE	BY	CHKD	APP'D	DATE	BY	CHKD	APP'D
1/10/00	DA	DA	DA	1/10/00	DA	DA	DA
1/10/00	DA	DA	DA	1/10/00	DA	DA	DA
1/10/00	DA	DA	DA	1/10/00	DA	DA	DA

NOTE: CONTRACT SUBBASE GRANULAR MATERIAL, TYPE C, FROM STA. 276+00 TO STA. 276+64.71



REVISION	DATE	BY	CHKD	APP'D
1	1/10/00	DA	DA	DA
2	1/10/00	DA	DA	DA
3	1/10/00	DA	DA	DA
4	1/10/00	DA	DA	DA
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8	1/10/00	DA	DA	DA
9	1/10/00	DA	DA	DA
10	1/10/00	DA	DA	DA



D&A Engineering, Inc.  
1400 N. 14TH STREET  
TULSA, OKLAHOMA 74104

CHARTERED & REGISTERED ENGINEERS

DAILY & ASSOCIATES, ENGINEERS, INC.

Prepared by

14TH STREET  
STA. 276+00 TO STA. 276+64.71

3 PROPOSED TYPICAL SECTION



**DAILY & ASSOCIATES, ENGINEERS, INC.**  
CHAPMAN & HUNTER, LLC & LUMLEY, KENTUCKY

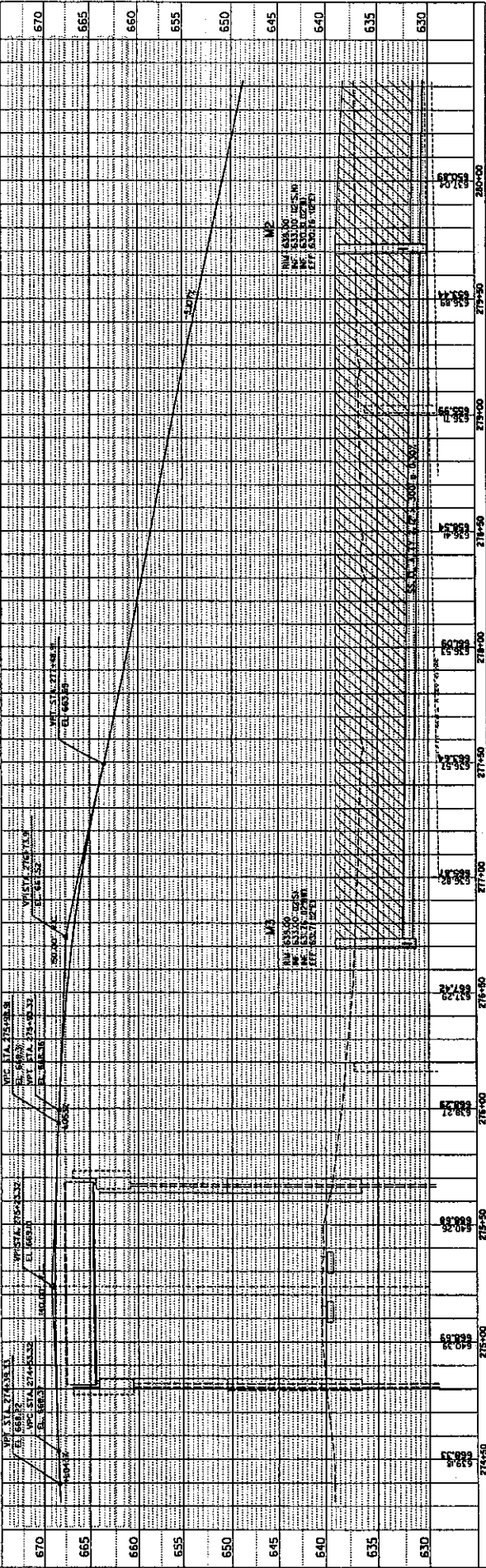
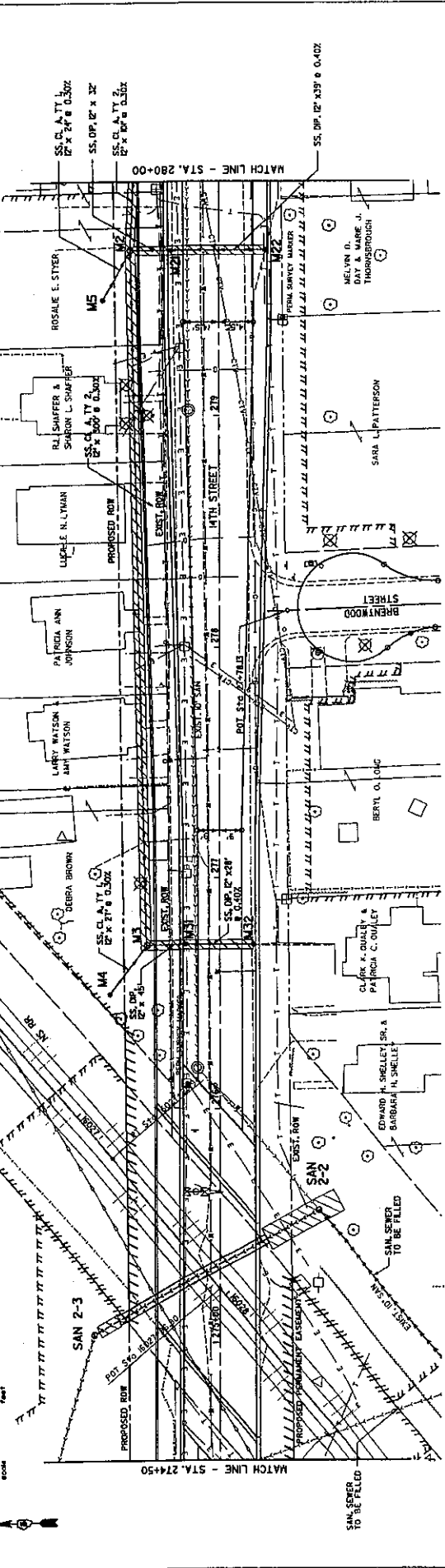








DATE	10/1/83	BY	WJS	CHECKED	WJS	DATE	10/1/83
PROJECT	14TH STREET - STA. 274+50 TO STA. 280+00						
SCALE	1" = 40'						
REVISION	1. 10/1/83 WJS						



14TH STREET - PLAN & PROFILE STA 274+50 TO STA 280+00

Prepared by: DAILY & ASSOCIATES, ENGINEERS, INC.  
 Checked by: [Signature]  
 Date: 10/1/83

DATE	BY	CHKD	APP'D
1/15/00	JLB	JLB	JLB
1/15/00	JLB	JLB	JLB
1/15/00	JLB	JLB	JLB

DATE	BY	CHKD	APP'D
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DATE	BY	CHKD	APP'D
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DATE	BY	CHKD	APP'D
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1/15/00	JLB	JLB	JLB
1/15/00	JLB	JLB	JLB

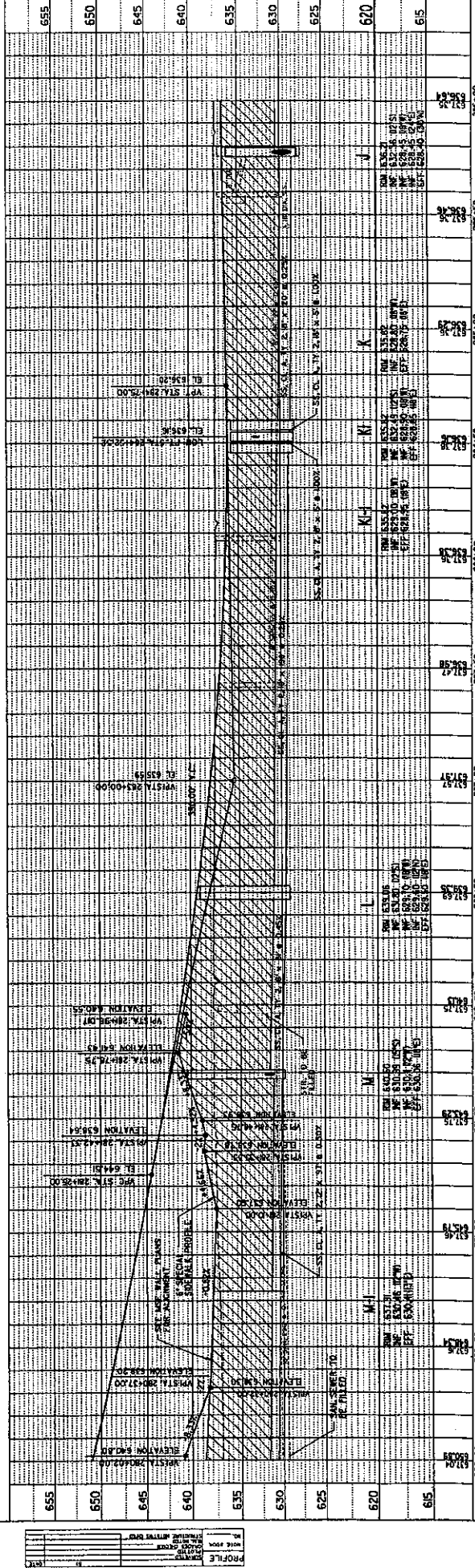
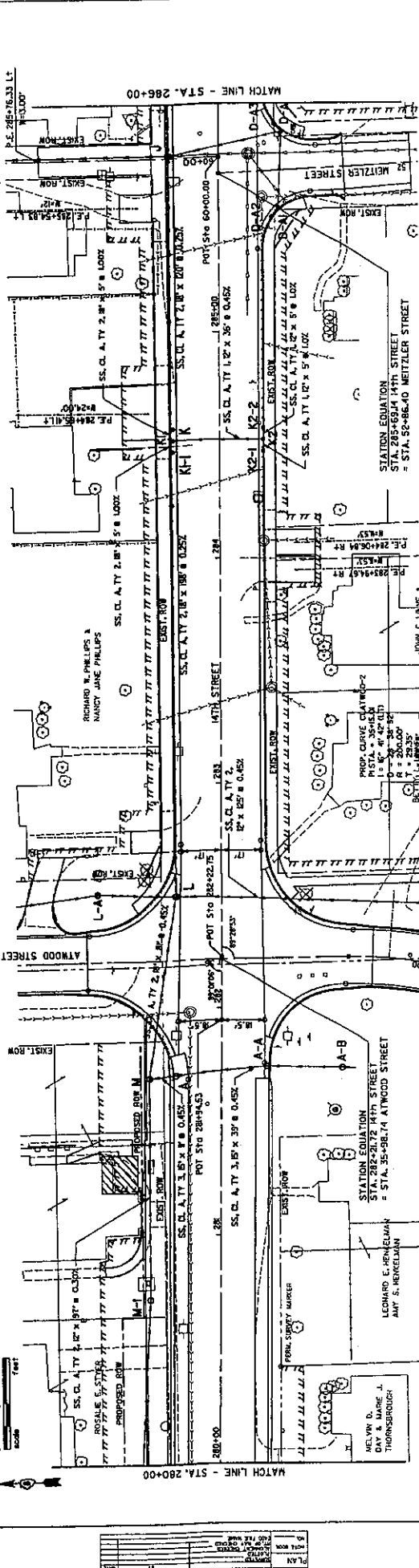
DATE	BY	CHKD	APP'D
1/15/00	JLB	JLB	JLB
1/15/00	JLB	JLB	JLB
1/15/00	JLB	JLB	JLB

DATE	BY	CHKD	APP'D
1/15/00	JLB	JLB	JLB
1/15/00	JLB	JLB	JLB
1/15/00	JLB	JLB	JLB

DATE	BY	CHKD	APP'D
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1/15/00	JLB	JLB	JLB

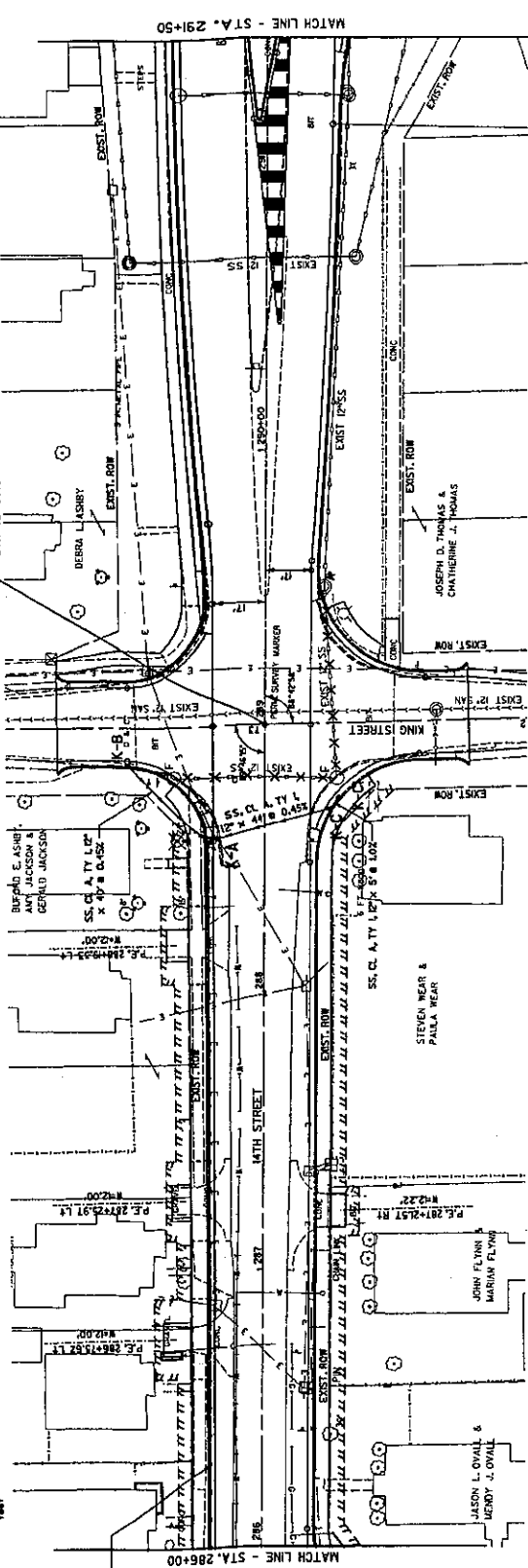
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1/15/00	JLB	JLB	JLB

DATE	BY	CHKD	APP'D
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1/15/00	JLB	JLB	JLB
1/15/00	JLB	JLB	JLB



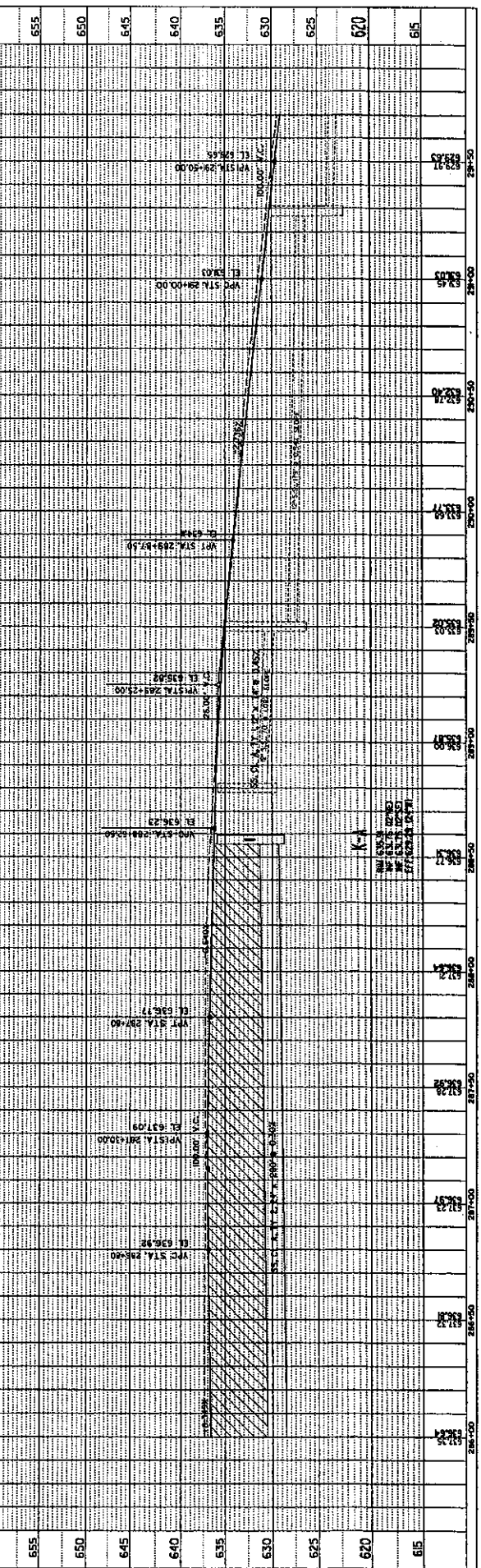
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10/00/00	10/00/00	10/00/00	10/00/00
10/00/00	10/00/00	10/00/00	10/00/00
10/00/00	10/00/00	10/00/00	10/00/00

STATION EQUATION  
STA 288+95.73 14TH STREET  
STA 73+00.07 KING STREET



SS CL A TY 2.7%  
x 280' @ 0.30%

NO.	DATE	BY	CHKD	APPD
1	10/00/00	10/00/00	10/00/00	10/00/00
2	10/00/00	10/00/00	10/00/00	10/00/00
3	10/00/00	10/00/00	10/00/00	10/00/00



NO.	DATE	BY	CHKD	APPD
1	10/00/00	10/00/00	10/00/00	10/00/00
2	10/00/00	10/00/00	10/00/00	10/00/00
3	10/00/00	10/00/00	10/00/00	10/00/00

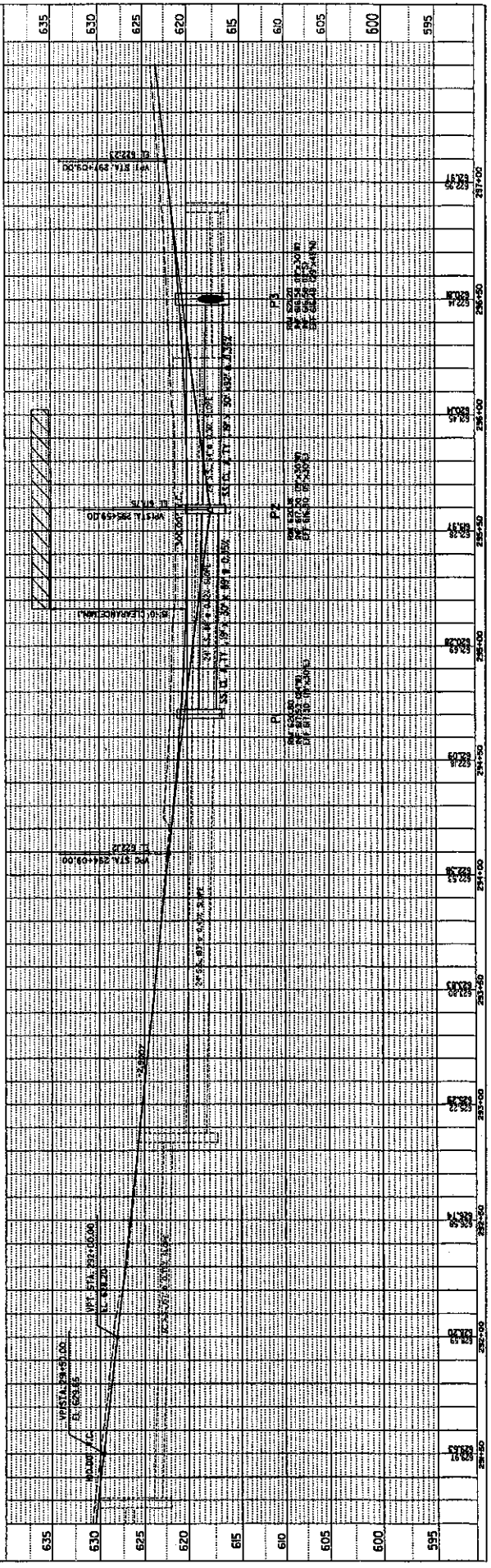
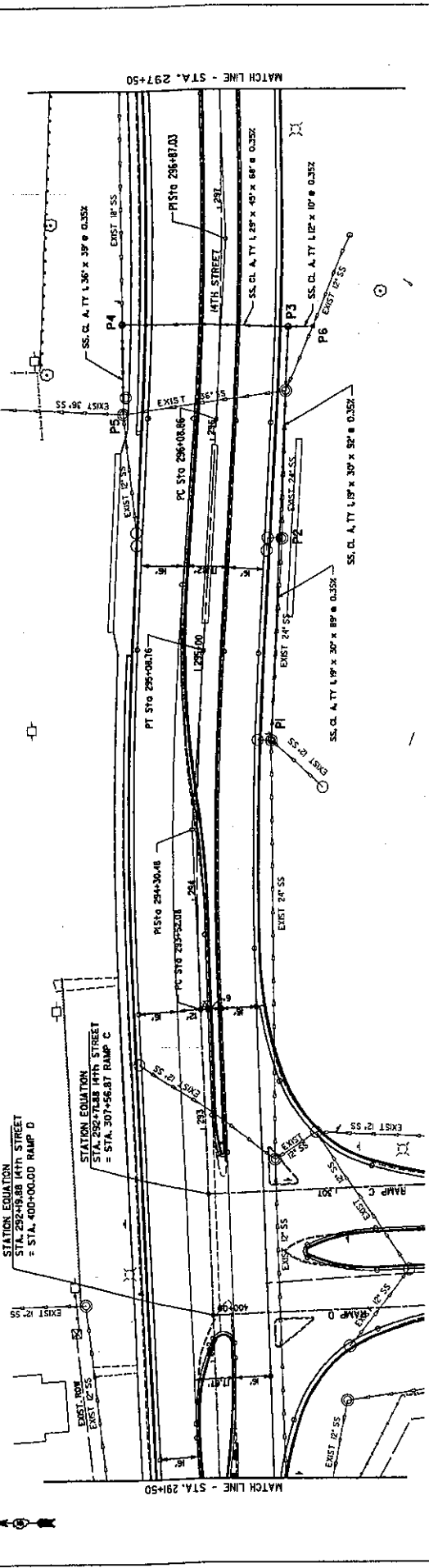
Prepared by: DAILY & ASSOCIATES, ENGINEERS, INC.

Checked by: KIMBERLY L. LAMBERT, LICENSED SURVEYOR

14TH STREET - PLAN & PROFILE STA 286+00 TO STA 291+50



DATE	BY	CHKD	APPD
10-000000-00-00	VENKATRAM	STO	LO
STA. 297+50			
PROJECT	C-297-24		



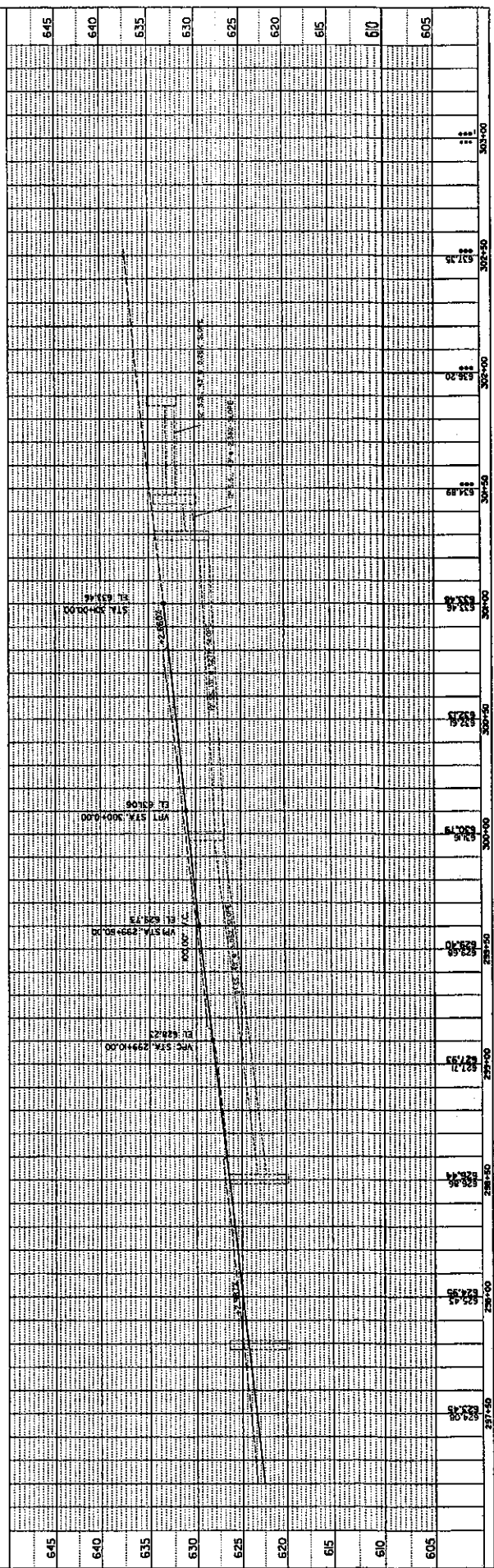
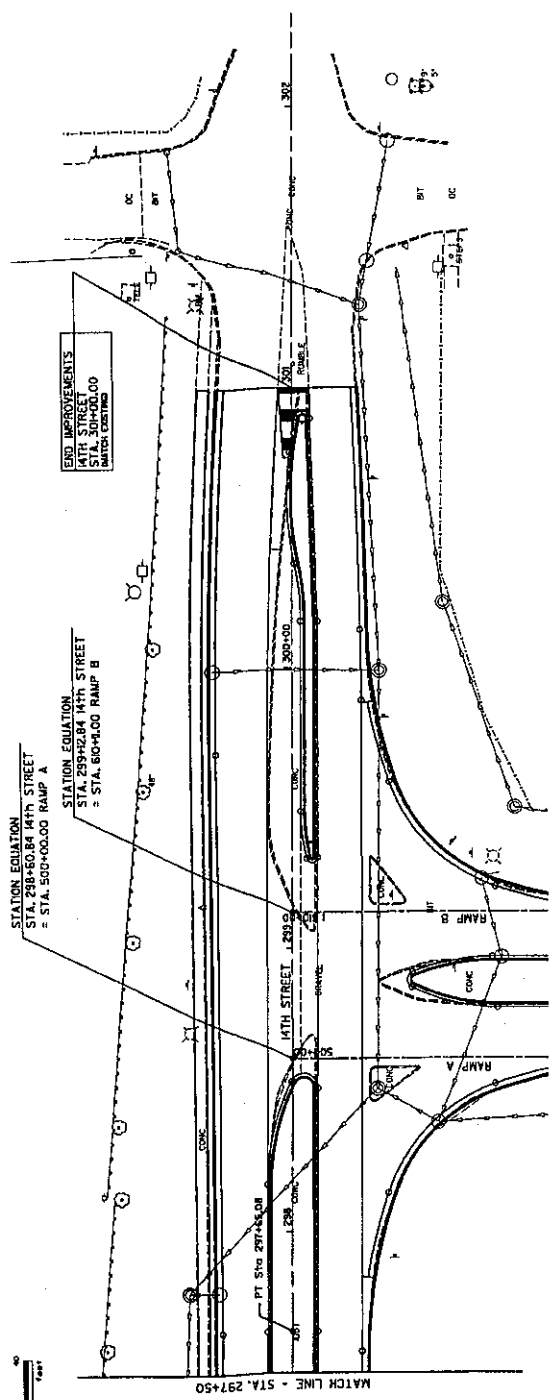
14TH STREET - PLAN & PROFILE STA 297+50 TO STA 299+50

DAILY & ASSOCIATES, ENGINEERS, INC.

CONCEPT & PRELIMINARY DESIGN

Prepared for

NO.	DATE	BY	CHKD.	APP'D.	REVISION
1	10-00000-00-00	10/00/00	10/00/00	10/00/00	10/00/00
2	10-00000-00-00	10/00/00	10/00/00	10/00/00	10/00/00
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4	10-00000-00-00	10/00/00	10/00/00	10/00/00	10/00/00
5	10-00000-00-00	10/00/00	10/00/00	10/00/00	10/00/00
6	10-00000-00-00	10/00/00	10/00/00	10/00/00	10/00/00
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8	10-00000-00-00	10/00/00	10/00/00	10/00/00	10/00/00
9	10-00000-00-00	10/00/00	10/00/00	10/00/00	10/00/00
10	10-00000-00-00	10/00/00	10/00/00	10/00/00	10/00/00



14TH STREET - PLAN & PROFILE STA 297+25 TO STA 302+50

CHAMP & ASSOCIATES, ENGINEERS, INC.

CHAMP & ASSOCIATES, ENGINEERS, INC.

# DESIGN SPECIFICATIONS

ES&B AASHTO with 1997 thru 2002 Interims  
Allow 50% for future wearing surface.

## LOADING HS20-44

## DESIGN STRESSES

## FIELD UNITS

$f_c = 3,500$  psi  
 $f_t = 60,000$  psi (reinforcement)  
 $f_y = 50,000$  psi AASHTO M 270 Grade 50 (structural steel)  
 $f_y = 36,000$  psi AASHTO M 270 Grade 36 (structural steel)

## SEISMIC DATA

Seismic Parameters Class (SPC) = A  
Source Seismicity Coefficient (AI) = 0.048  
Site Coefficient (S1) = 1.0

I certify that to the best of my knowledge, information and belief, this design complies with all applicable laws, codes, regulations, and standards. The design is an economical one for the style of structure and complies with the requirements of the AASHTO Standard Specifications for Highway Bridges.

# GENERAL PLAN & ELEVATION

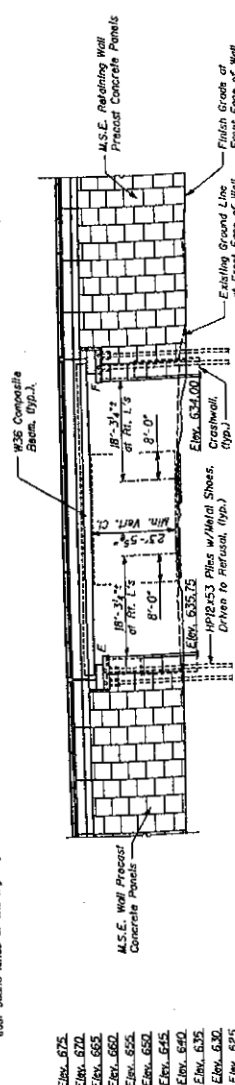
Revisions	Rev.	Date	Description	Submitted	DOC	4414 STREET OVER NSRY				SIC 00-00000-00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 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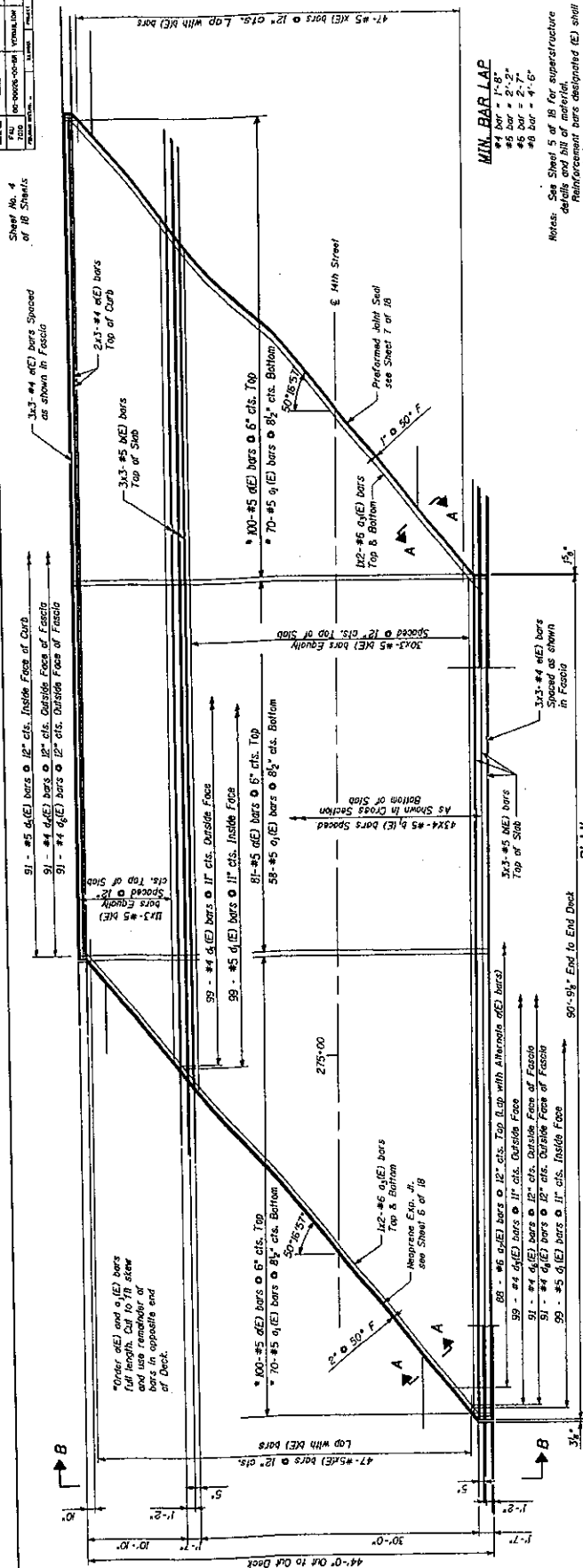
14th Street Over US 91  
Sta. 274+79.57 to 274+84.25  
F.A.U. RT. 700  
STATION 275+23.32  
LOADING HS20  
STR. NO. 092-6035

NAME PLATE  
See STA. 515001

Existing Structure: None. 14th Street shall be closed and traffic diverted during construction.

Branch Mark: National Geographic Survey 1986, Branch Mark K. 300.  
Station 274+79.57 is located in T10N of the intersection of  
Interstate Highway 74 and County Road 1506. In the top of and 2.3 ft  
west of the east end of the south concrete abutment of the road  
overpass of the highway, 114.2 ft south of the centerline of the  
east bound lanes of the highway. Elevation 636.44.

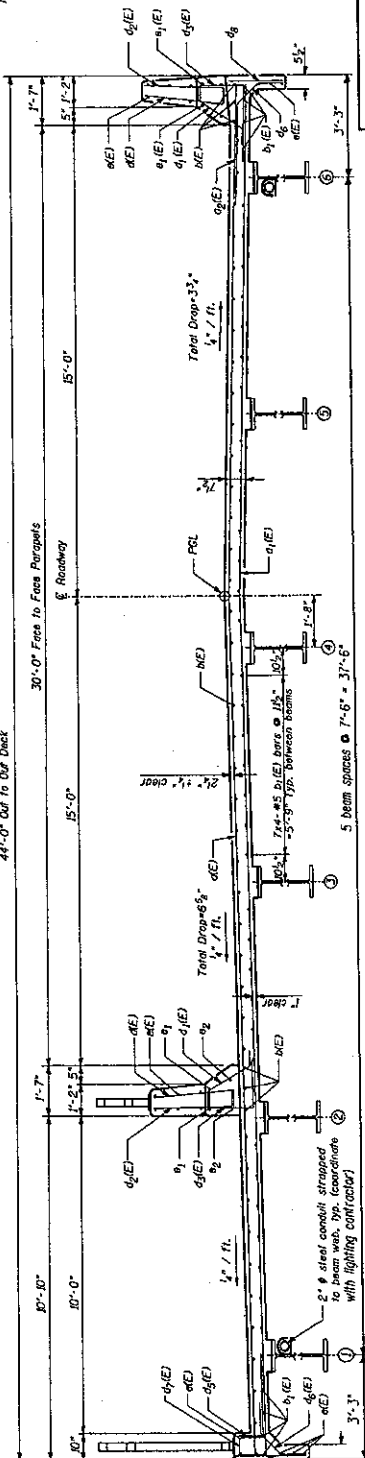




MIN. BAR LAP

#4 bar = 1'-8"  
#5 bar = 2'-2"  
#5 bar = 2'-7"  
#8 bar = 4'-6"

**Notes:** See Sheet 5 of 18 for superstructure details and bill of material.  
Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus: 20x3-#5 etc. indicates 20 lbs of bars with 3 lengths per line.  
See Sheet 5 of 18 for parapet reinforcement.  
See Sheet 5 of 18 for parapet reinforcement.  
See Sheet 5 of 18 for Sections A-A and B-B.



## DECK PLAN AND CROSS SECTION

Referrals		Surveyed	DOC
No.	NAME	INITIALS	DATE
1	PAU	PAU	PAU
2	Drama	PAU	PAU
3	Shirley	PAU	PAU
4	Shirley	PAU	PAU
5	Shirley	PAU	PAU
6	Shirley	PAU	PAU
7	Shirley	PAU	PAU
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93	Shirley	PAU	PAU
94	Shirley	PAU	PAU
95	Shirley	PAU	PAU
96	Shirley	PAU	PAU
97	Shirley	PAU	PAU
98	Shirley	PAU	PAU
99	Shirley	PAU	PAU
100	Shirley	PAU	PAU

CROSS SECTION



# DESIGN SPECIFICATIONS

1996 AASHTO AND 1997 THRU 2000 INTERIMS

## LOADING HS20-44

Allow 50% fac. fr. for future wearing surface.

## DESIGN STRESSES

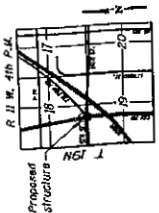
**FIELD UNITS**  
 $f'_c = 3,500$  psi  
 $f'_s = 60,000$  psi (reinforcement)  
**PRECAST UNITS**  
 $f'_c = 3,500$  psi  
 $f'_s = 60,000$  psi (reinforcement)  
 $f'_c = 60,000$  psi (welded wire fabric)  
 $f'_c = 65,000$  psi (welded wire fabric)  
 Allowable Soil Bearing Pressure = 4.5 tsf

## SEISMIC DATA

Solistic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = .048  
 Site Coefficient (S) = 1.0

## NOTES:

Dimensions for 3-ribbed precast concrete structure are for a 30' span section. 40' Span and 30' Span bridge sections are also acceptable, but dimensions may vary.  
 The footing design is based on the following maximum reactions applied to the top of the footing/pierhead wall:  
 33.5 KLF (vertical)  
 7.0 KLF (horizontal)  
 The Contractor shall verify that the selected structure meets these design parameters.  
 If the design parameters are exceeded, a complete footing design with calculations, details and the required reinforcement shall be submitted for Engineer approval.  
 I certify that to the best of my knowledge and belief, this bridge design is structurally adequate for the design loading shown on the plans. This design is based on the current requirements of the current AASHTO Standard Specifications for Highway Bridges.



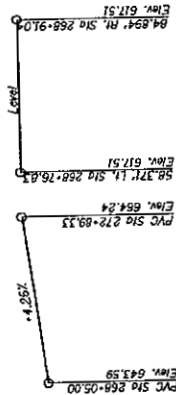
CSX RR  
 BUILT 200 BY  
 VILLAGE OF TILTON  
 SEC. 00-00005-00-BR  
 F.U.I. RT. 700  
 STATION 269+85.69  
 LOADING HS20  
 STR. NO. 082-5037

## NAME PLATE

See Std. 515001

## TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB	TOTAL
Reinforcing Structures No. 1	Each	773	1
Reinforcing Structures No. 2	Each	773	1
Concrete Structures	Cu. Yd.	229.1	229.1
Reinforcement Bars, Eased Coated	Pounds	24,390	24,390
Form Panels	Sq. Yd.	54.6	54.6
Three-Sided Precast Concrete Structure	Sq. Yd.	208	208
Protective Sheet	Sq. Yd.	208	208

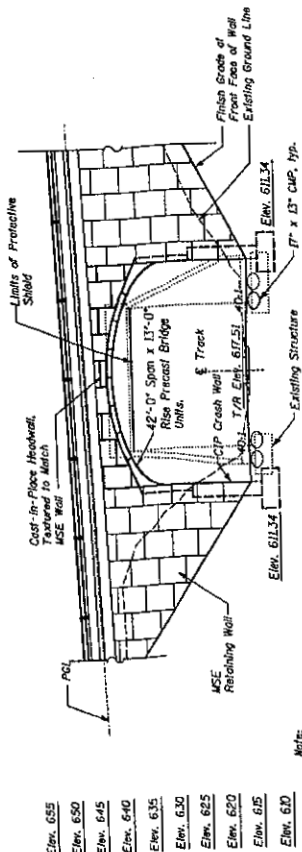


## PROFILE GRADE TOP OF RAIL ELEVATIONS

## GENERAL PLAN & ELEVATION

Particulars	Quantity	Unit	Remarks
Structure	1	Each	MIN STREET OVER CSX RR
Foundation	1	Each	
Formwork	54.6	Sq. Yd.	
Reinforcement	24,390	Lbs.	
Concrete	229.1	Cu. Yd.	
Structure	1	Each	
Foundation	1	Each	
Formwork	54.6	Sq. Yd.	
Reinforcement	24,390	Lbs.	
Concrete	229.1	Cu. Yd.	
Structure	1	Each	
Foundation	1	Each	
Formwork	54.6	Sq. Yd.	
Reinforcement	24,390	Lbs.	
Concrete	229.1	Cu. Yd.	

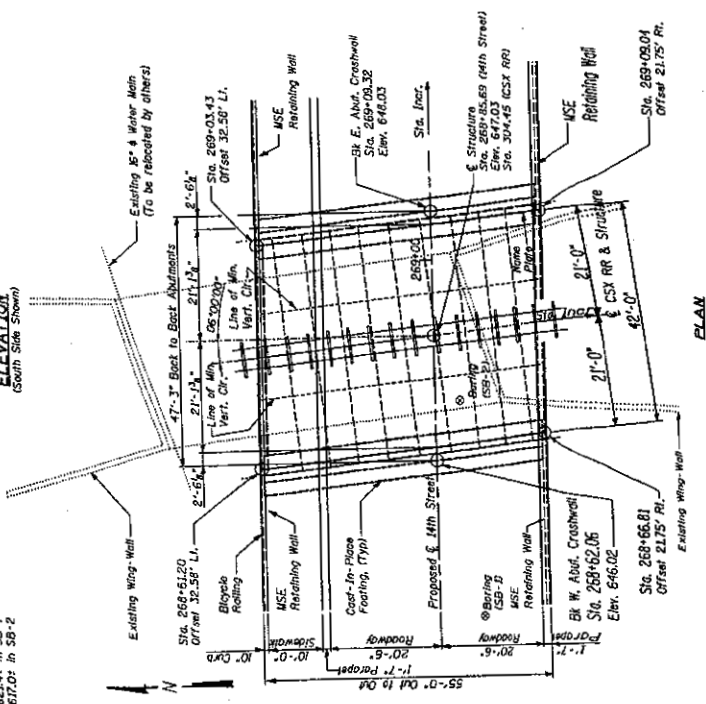
Notional Geologic Survey 1996 Bench Mark K-300 Standard bench mark located in Tilton at the intersection of Interstate Highway 74 and County Road 25. The top of and 2.3 ft west of the south concrete abutment of the road overpass of the highway, 114.2 ft south of the centerline of the east bound lanes of the highway. Elevation 636.44.  
 S.M. 082-00086, Single span California concrete superstructure on solid concrete abutments and spread footings. Built in 1914 to carry a single track passenger train. The structure is a simple three-sided precast concrete structure with cast-in place footings and crashwall. The road shall be closed and traffic diverted during construction. No change.



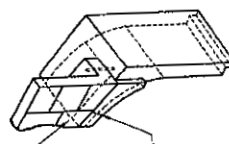
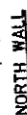
## ELEVATION

(South Side View)

Notes:  
 1. Existing Rock Elevation  
 Elev. 621.41 in SB-1  
 Elev. 617.01 in SB-2



## PLAN

[illegible]